CLAIMS

Sub A1

1. A method for use in a client computer, the method comprising:

detecting when a media stream received from a server computer in the network system has become globally unsynchronized with a corresponding media stream being streamed to another client computer; and

altering a presentation of the media stream in order to resynchronize the media stream.

2. A method as recited in claim 1, wherein the altering includes altering the media stream.

3. A method as recited in claim 1, wherein the altering comprises compressing a presentation timeline of the media stream.

4. A method as recited in claim 1, wherein the altering comprises increasing the speed at which the media stream is rendered.

5. A method as recited in claim 1, wherein the altering comprises omitting selected frames from the media stream.

6. A method as recited in claim 1, wherein the altering comprises using time-scale-modification to remove data from or add data to the media stream.

7. A method as recited in claim 1, wherein the altering comprises jumping ahead to a later presentation time.

8. A method as recited in claim 1, wherein the altering comprises pausing the presentation of the media stream.

9. A method as recited in claim 1, further comprising:

storing at least a portion of the media stream in a data buffer; and

wherein the detecting comprises comparing the amount of data stored in the data buffer with a threshold.

10. A method as recited in claim 1, further comprising:

detecting when the media stream has been globally resynchronized; and

altering the presentation of the media stream when the media stream has been globally resynchronized.

11. A method as recited in claim 10, wherein the altering of the presentation timeline of the media stream when the media stream has been globally resynchronized comprises altering the presentation timeline to be the same as it was when the media stream was globally unsynchronized.

12. A computer-readable memory which directs the client computer to perform the steps of the method as recited in claim 1.

13. An apparatus for use in a network system, the apparatus comprising:

a receiving component to receive a plurality of media streams from a server computer in the network system;

a synchronizing component, coupled to the receiving component, to determine if the plurality of media streams have become globally unsynchronized; and

a timeline modification component, coupled to the synchronizing component, to alter the presentation timeline of at least one of the media streams if the plurality of media streams become globally unsynchronized.

14. An apparatus as recited in claim 13, wherein the timeline modification component is to alter the timeline of the at least one media stream by compressing the timeline.

15. An apparatus as recited in claim 13, wherein the timeline modification component is to alter the timeline of the at least one media stream by omitting selected frames from the media stream.

16. An apparatus as recited in claim 13, wherein the timeline modification component is to alter the timeline of the at least one media stream by using time-scale-modification to remove data from or add data to the media stream.

17. A computer-readable storage medium containing a program for resynchronizing a media stream, the program having instructions that are executable by a network client to perform steps comprising:

receiving, from a server computer in the network, a composite media stream including a plurality of media streams;

detecting when the plurality of media streams have become globally unsynchronized; and

altering a timeline of at least one of the media streams in order to resynchronize the media streams.

18. A computer-readable storage medium as recited in claim 17, wherein the detecting comprises comparing current presentation times of the plurality of media streams to one another, and wherein the altering comprises altering the media stream of the plurality of media streams having a presentation time that is lagging behind the presentation times of one or more of the other media streams.

19. A computer-readable storage medium as recited in claim 17, wherein the detecting comprises comparing current presentation times of the plurality of media streams to one another, and wherein the altering comprises altering the media stream of the plurality of media streams having a presentation time that is ahead of the presentation times of one or more of the other media streams.

20. A computer-readable storage medium as recited in claim 17, wherein the altering comprises altering each media stream of the plurality of media streams.

21. A computer-readable storage medium as recited in claim 17, wherein the altering comprises compressing the timeline of the at least one media stream.

22. A computer-readable storage medium as recited in claim 17, wherein the altering comprises increasing the speed at which the at least one media stream is rendered.

23. A computer-readable storage medium as recited in claim 17, wherein the altering comprises omitting selected frames from the at least one media stream.

24. A computer-readable storage medium as recited in claim 17, wherein the altering comprises using time-scale-modification to remove data from the media stream.

25. A computer-readable storage medium as recited in claim 17, the program having instructions that are executable by the network client to further perform steps comprising:

detecting when the media streams have been resynchronized; and

altering the timeline of the at least one media stream when the media streams have been resynchronized.

26. A computer-readable storage medium as recited in claim 25, wherein the step of altering the timeline of the at least one media stream when the media streams have been resynchronized comprises altering the timeline to be the same as it was when the at least one media stream was globally unsynchronized.

27. A method for use in a server computer of a network, the method comprising:

identifying when a media stream corresponding to media content being provided to a client computer has become globally unsynchronized; and

selecting, in response to identifying the media stream is globally unsynchronized, a different media stream corresponding to the media content to provide to the client computer.

28. A method as recited in claim 27, wherein the identifying comprises receiving an out of synchronization message from the client computer.

29. A method as recited in claim 27, wherein the selecting comprises selecting a media stream having a faster rendering speed than the globally unsynchronized stream.

30. A method as recited in claim 27, further comprising:

identifying when the media stream has been resynchronized; and

selecting another media stream corresponding to the media content to provide to the client computer.

31. A computer-readable memory which directs a computer to perform the steps of the method as recited in claim 27.

32. An apparatus for use in a network, the apparatus comprising:

a plurality of media streams available for provision to a client computer, each corresponding to different presentation timelines of media content; and

a selector coupled to select one of the plurality of media streams to provide to the client computer to resynchronize the media content in response to a media stream being received by the client computer becoming globally unsynchronized.

33. An apparatus as recited in claim 32, wherein the selector is to select one of the plurality of media streams in response to an out of synchronization message received from the client computer.

34. A computer-readable storage medium containing a program for resynchronizing a media stream, the program having instructions that are executable by a network server to perform steps comprising:

providing, to a client computer, a composite media stream corresponding to media content, the composite media stream including a plurality of media streams;

identifying when a media stream of the plurality of media streams has become globally unsynchronized; and

selecting, when the media stream becomes globally unsynchronized, a different media stream corresponding to the media content to provide to the client computer.

35. A computer-readable storage medium as recited in claim 34, wherein the step of identifying comprises receiving an out of synchronization message from the client computer.

36. A computer-readable storage medium as recited in claim 34, wherein the step of selecting comprises selecting a media stream having a faster rendering speed than the globally unsynchronized stream.

37. A computer-readable storage medium as recited in claim 34, the program having instructions that are executable by the network server to further perform steps comprising:

identifying when the media stream has been resynchronized; and

selecting another media stream corresponding to the media content to provide to the client computer.

38. A networked client/server system comprising:

a network server;

a plurality of network clients that communicate with the network server over a data communications network;

a plurality of composite media streams available from the network server, each composite media stream comprising a plurality of individual media streams

that can be rendered by the network clients to produce different types of user-perceivable media; and

the network clients each including a synchronizing component to determine if one of the individual media streams is out of synchronization with a corresponding media stream at another of the plurality of network clients, and a timeline modification component to alter the timeline of an individual media stream when it is out of synchronization.

39. A method for use in a server computer of a network, the method comprising:

identifying when a media stream corresponding to media content being streamed to a client computer has become globally unsynchronized; and

altering, in response to identifying the media stream is globally unsynchronized, the streaming of data to the client computer in order to globally resynchronize the media stream.

40. A method as recited in claim 39, wherein the altering comprises selecting a different media stream corresponding to the media content to stream to the client computer.

41. A method as recited in claim 39, wherein the altering comprises jumping to a later time in the media stream and resuming streaming of the media stream corresponding to the later time to the client computer.

42. A method as recited in claim 39, wherein the altering comprises pausing the streaming of data to the client computer.